Creating and ordering IPv4 security policies to provide network access

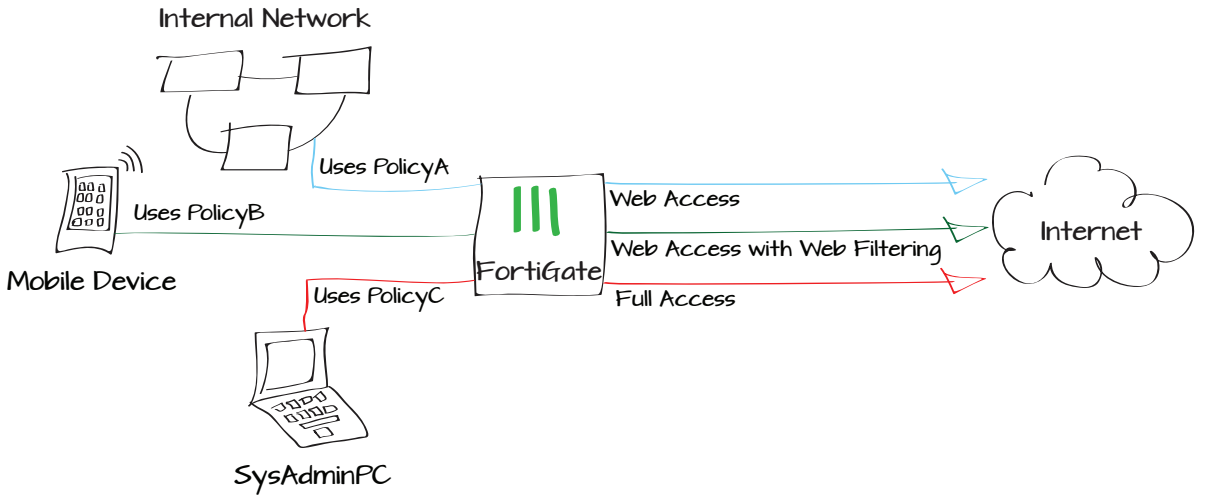
This example shows how to create and order multiple security policies in the policy table, in order to apply the appropriate policy to various types of network traffic.

In the example, three IPv4 policies will be configured. PolicyA will be a general policy allowing Internet access to the LAN. PolicyB will allow Internet access while applying web filtering for specific mobile devices connecting through the LAN. PolicyC will allow the system administrator's PC (named SysAdminPC) to have full access.

A fourth policy, the default "deny" policy, will also be used.

In this example, a wireless network has already been configured that is in the same subnet as the wired LAN.

1. Configuring PolicyA to allow general web access
2. Creating PolicyB to allow access for mobile devices
3. Defining SysAdminPC
4. Creating PolicyC to allow access for SysAdminPC
5. Ordering the policy table
6. Results

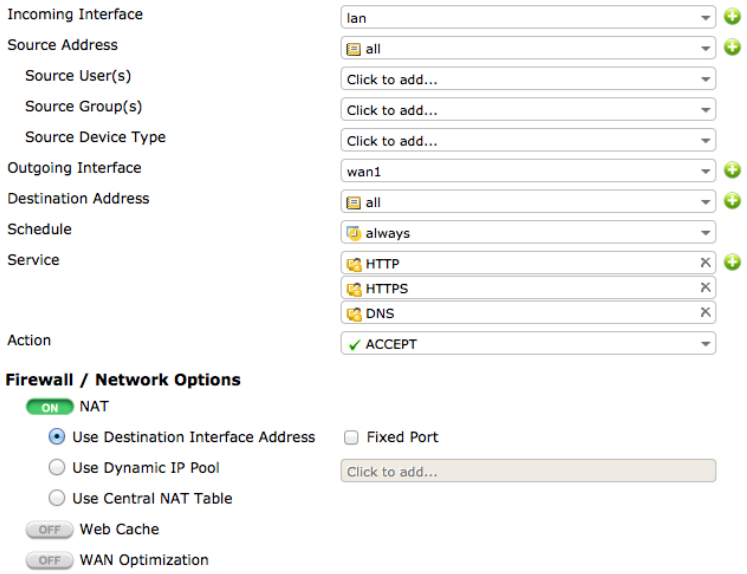


Configuring PolicyA to allow general web access

Go to **Policy & Objects > Policy > IPv4** and edit the policy allowing outgoing traffic.

Set **Service** to **HTTP**, **HTTPS**, and **DNS**.

Ensure that you have enabled **NAT**.



Scroll down to view the **Logging Options**. In order to view the results later, enable **Log Allowed Traffic** and select **All Sessions**.

Creating PolicyB to allow access for mobile devices

Go to **Policy & Objects > Policy > IPv4** and create a new policy.

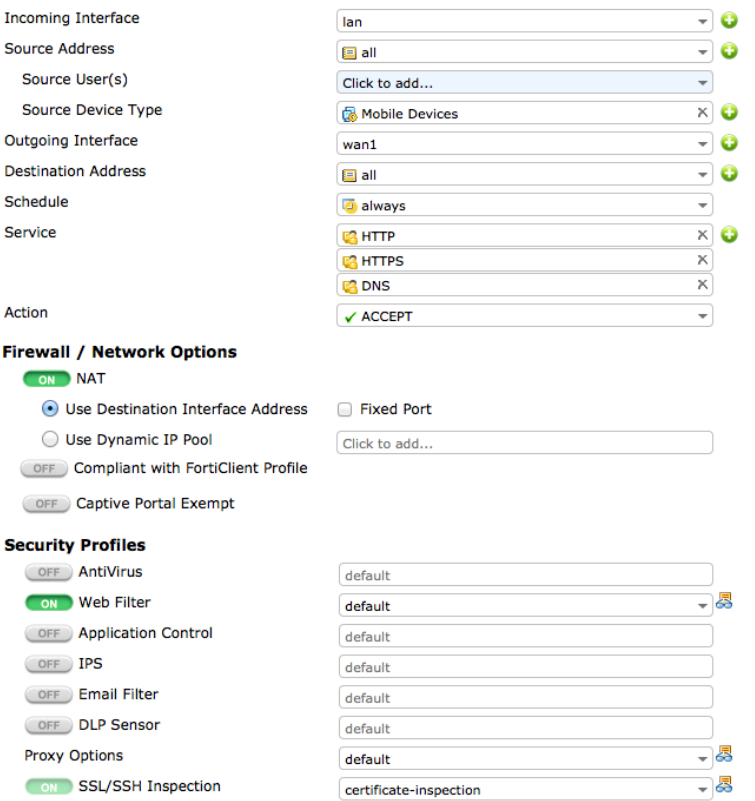
Set **Incoming Interface** to **lan**, **Source Device Type** to **Mobile Devices** (a default device group that includes tablets and mobile phones), **Outgoing Interface** to your Internet-facing interface, and **Service** to **HTTP**, **HTTPS**, and **DNS**.

Enable **NAT**.

Under **Security Profiles**, enable **Web Filter** and set it to use the **default** profile. This action will enable **Proxy Options** and **SSL Inspection**. Use the **default** profile for Proxy Options and set SSL Inspection to **certificate-inspection** to allow HTTPS traffic to be inspected.

Using a device group will automatically enable device identification on the **lan** interface.

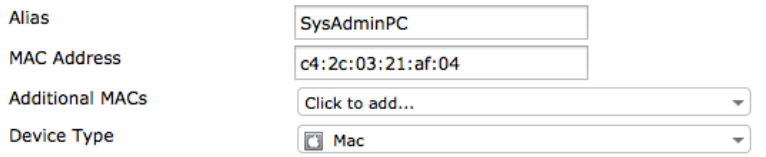
Scroll down to view the **Logging Options**. In order to view the results later, enable **Log Allowed Traffic** and select **All Sessions**.



Defining SysAdminPC

Go to **User & Device > Device > Device Definitions** and create a new definition for the system administrator's PC.

Select an approprate **Alias**, then set the **MAC Address**. Set the appropriate **Device Type**.

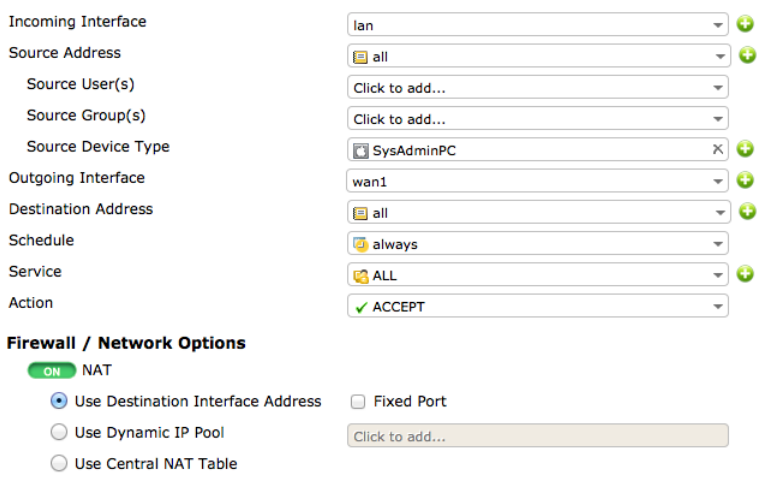


Configuring PolicyC to allow access for SysAdminPC

Go to **Policy & Objects > Policy > IPv4** and create a new policy.

Set **Incoming Interface** to **lan**, **Source Device Type** to SysAdminPC, **Outgoing Interface** to your Internet-facing interface, and **Service** to **ALL**.

Enable **NAT**.



Scroll down to view the **Logging Options**. In order to view the results later, enable **Log Allowed Traffic** and select **All Sessions**.

Ordering the policy table

Go to **Policy & Objects > Policy > IPv4** to view the policy table.

Currently, the policies are arranged in the order they were created: PolicyA is at the top, followed by PolicyB, PolicyC, and the default deny policy. In order to have the correct traffic flowing through each policy, they must be arranged so that the more specific policies are located at the top.

Seq.#	From	To	Service	Web Filter	Devices
1	lan	wan1	HTTP HTTPS DNS		
2	lan	wan1	HTTP HTTPS DNS	WEB default	Mobile Devices
3	lan	wan1	ALL		SysAdminPC
4	any	any	ALL		

In the example, the policy table has been set to show only the columns that best display the differences between the policies. To do this, right-click on the top of the table, select or deselect columns as necessary, then select **Apply**.

To reorder the policies, select any area in the **Seq.#** column for PolicyB and drag the policy to the top of the list. Repeat this for PolicyC, so that the order is now PolicyC, PolicyB, PolicyA, and the default deny policy.

Refresh the page to see the updated **Seq.#** values.

Seq.#	From	To	Service	Web Filter	Devices
1	lan	wan1	ALL		SysAdminPC
2	lan	wan1	HTTP HTTPS DNS	WEB default	Mobile Devices
3	lan	wan1	HTTP HTTPS DNS		
4	any	any	ALL		

Results

Browse the Internet using the system administrator's PC, a different PC, and a mobile device.

Go to **Log & Report > Traffic Log > Forward Traffic**.

You can see that traffic from the three devices flows through different policies. In the example, the SysAdmin PC (IP 10.10.11.10), a Windows PC (IP 10.10.11.14), and an iPad (IP 10.10.11.13) were used to generate traffic.

#	Policy ID	Date/Ti...	Source	Destination	Device
1	3	13:42:18	10.10.11.10	72.167.239.239 (ocsp.godaddy.com.akadns.net)	SysAdminPC
2	3	13:42:18	10.10.11.10	208.91.114.193	SysAdminPC
3	3	13:42:18	10.10.11.10	192.0.65.242 (polldaddy.com)	SysAdminPC
4	3	13:42:18	10.10.11.10	208.91.114.193	SysAdminPC
5	3	13:42:18	10.10.11.10	192.0.65.242 (polldaddy.com)	SysAdminPC
6	3	13:42:18	10.10.11.10	208.91.114.193	SysAdminPC
7	1	13:41:55	10.10.11.14	74.125.226.133 (safebrowsing-cache.google.com)	00:26:22:6c:be:d6
8	1	13:41:55	10.10.11.14	74.125.226.133 (safebrowsing-cache.google.com)	00:26:22:6c:be:d6
9	1	13:41:55	10.10.11.14	74.125.226.133 (safebrowsing-cache.google.com)	00:26:22:6c:be:d6
10	1	13:41:55	10.10.11.14	74.125.226.133 (safebrowsing-cache.google.com)	00:26:22:6c:be:d6
11	1	13:41:55	10.10.11.14	74.125.226.133 (safebrowsing-cache.google.com)	00:26:22:6c:be:d6
12	1	13:41:55	10.10.11.14	74.125.226.133 (safebrowsing-cache.google.com)	00:26:22:6c:be:d6
13	2	13:39:51	10.10.11.13	17.134.126.129 (gs-loc.ls-apple.com.akadns.net)	d8:a2:5e:1d:b1:a6
14	2	13:39:34	10.10.11.13	66.235.138.194 (metrics.apple.com)	d8:a2:5e:1d:b1:a6
15	2	13:39:34	10.10.11.13	184.87.13.15 (e3191.dscc.akamaiedge.net)	d8:a2:5e:1d:b1:a6
16	2	13:39:34	10.10.11.13	23.0.160.208 (images.apple.com)	d8:a2:5e:1d:b1:a6

Policy ID is automatically assigned to a policy when it is created, and so, in the example, the ID for PolicyA is 1, PolicyB is 2, and PolicyC is 3.

(Optional) Attempt to make an SSL connection to a web server with all three devices. Only the system administrator's PC will be able to connect.